

REMARKS

I. Introduction

In response to the pending Office Action, Applicants have amended claims 1, 16, 20, 23, 25 and 27, and added new claims 29-31. Support for the amendment to claims 1 and 20, and for new claims 29 and 30, can be found, for example on page 4, lines 1-5; page 10, line 30 to page 11, line 4; page 12, line 31 to page 13, line 14 and page 31, lines 28-32 of the specification. Claims 25 and 27 have been rewritten in independent format including all of the limitations of the underlying base claim. Support for new claim 31 can be found, for example, in Fig. 1 of the specification. No new matter has been added.

For the reasons set forth below, it is respectfully submitted that all pending claims are patentable over the cited prior art.

II. The Rejection Of The Claims Under 35 U.S.C. § 112

Claims 1-13, 16-20 and 23-28 were rejected under 35 U.S.C. § 112, first paragraph. In response, Applicants have amended claim 1 to address the issue raised by the Examiner in paragraph 5 of the Office Action. Specifically, Applicants have amended claims 1 and 20 to recite that the laminate is maintained in a depressurized state prior to and during application of said pressing force in said second step. As noted by the Examiner, support for the foregoing amendment can be found on page 17, lines 18-27 of the specification. It is submitted that the foregoing amendment resolves the issue concerning the original claim language raised by the Examiner. As such, it is respectfully submitted that the pending rejection has been overcome.

III. The Rejection Of The Claims Under 35 U.S.C. § 103

Claims 1-11, 13, 16, 17, 20 and 23-28 were rejected under 35 U.S.C. § 103 as being unpatentable over USP NO. 5,573,62 to Hass in view of GB 2274810 to Koderä. Applicants respectfully submit that, as amended, the pending claims are patentable over Hass and Koderä taken alone or in combination with one another.

First, as recited by amended claim 1, the present invention relates to a novel method of manufacturing a laminate and recites that the first laminate contains polyolefin, and (in the second step) applying a pressing force to the first laminate while heating the first laminate to a temperature higher than the softening temperature of polyolefin.

As explained in detail in the specification, the present invention as recited by claim 1 utilizes polyolefin, such as polyethylene, as an organic binder. A green sheet containing polyolefin has a small density with a large porosity of more than 30%. When a green sheet having such a large porosity is heated, the laminate will exhibit significant shrinkage, which can result in structural defects, as is detailed on page 12, line 31 to page 13, line 14 of the specification.

The present invention cures this problem by applying a pressing force to the laminate containing polyolefin when heating the laminate at a temperature higher than the temperature at which the polyolefin is softened, as recited by claim 1. As a result, because the pressing force is applied prior to heating the laminate to a temperature at which the polyolefin is softened, shrinkage of the laminate is prevented.

Turning to the cited prior art references, it is acknowledged in the pending

rejection that neither Hass nor Koderer disclose the use of polyolefin. As such, it is also clear that the neither Hass nor Koderer disclose the manufacturing method of claim 1, which recites applying a pressing force to the first laminate containing polyolefin while heating the first laminate to a temperature higher than the softening temperature of polyolefin.

Accordingly, as each and every limitation must be disclosed or suggested by the cited prior art references in order to establish a *prima facie* case of obviousness (see, M.P.E.P. § 2143.03), and both Hass and Koderer, at a minimum, fail to disclose the foregoing limitation, it is clear that amended claim 1 and the claims dependent thereon are patentable over Hass and Koderer.

It is noted that USP No. 4,935,844 to Burns is cited as disclosing the use of polyolefin. However, Burns only discloses the use of polyolefin as one of many possible materials. Importantly, Burns does not appear to disclose or suggest a method of manufacturing a laminate containing polyolefin as an organic binder. Thus, even if it was asserted that Burns could be combined with Hass and Koderer, it is only Applicants' disclosure that discloses a method which comprises applying a pressing force to the first laminate containing polyolefin while heating the first laminate to a temperature higher than the softening temperature of polyolefin. Thus, the only motivation of record for the proposed modification of the device of Hass, Koderer and Burns to arrive at the claimed invention is found in Applicants' disclosure which, of course, may not properly be relied upon to support the ultimate legal conclusion of obviousness under 35 U.S.C. §103. ***Panduit Corp. v. Dennison Mfg. Co.***, 810 F.2d 1561, 227 1 USPQ2d 1593 (Fed. Cir. 1987).

For all of the foregoing reasons, it is respectfully submitted that claim 1 and all claims dependent thereon are patentable over the cited prior art.

Claim 20 has been amended in a manner to similar to claim 1. It is respectfully that claim 20 and the claims dependent thereon are patentable over the prior art for at least the same reasons as claim 1.

Claims 25 and 27 have been amended into independent format. It is noted that neither claim 25 nor 27 was expressly discussed in the pending rejection. Applicants maintain that these claims are patentable over Hass and Koderia, because at a minimum, the combination of prior art references is improper as applied against these claims, and moreover, it does not appear that each limitation of the claims is disclosed by the prior art even assuming aground that the combination is proper. For example, it does not appear that the prior art references disclose an elastic member covering an upper surface, a lower surface and a side surface of the laminate as recited by claim 27. In the event the rejection of claims 25 and 27 is maintained, it is respectfully requested that the Examiner expressly identify how the prior art reads on all of the limitations of these claims so as to allow the Applicants an opportunity to provide a detailed response to the rejection.

IV. Request For Notice Of Allowance

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an

Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that Applicant has inadvertently overlooked the need for a petition for extension of time. The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-0417.

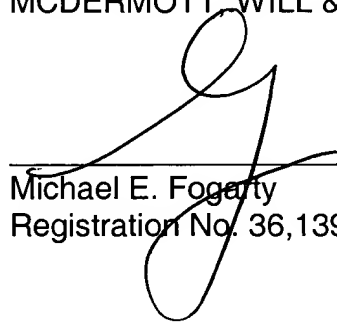
Respectfully submitted,

MCDERMOTT, WILL & EMERY

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7/16/03

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